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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/480,193	01/10/2000	Shi-Jun Yang	IR 3556	4031

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EXAMINER

UHLIR, NIKOLAS J

ART UNIT	PAPER NUMBER
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1773

DATE MAILED: 02/01/2002

8

Please find below and/or attached an Office communication concerning this application or proceeding.

MF-8

**Office Action Summary**

Application No.

09/480,193

Applicant(s)

YANG ET AL.

Examiner

Nikolas J. Uhler

Art Unit

1773

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_ 6) ☐ Other:

## **DETAILED ACTION**

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

### ***Claim Rejections - 35 USC § 112***

1. Claims 1, 8, and 9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites the limitation "wherein the article has a frosted, a surface textured finish or a frosted and surface textured finish." It is unclear what limitations are contained within this statement. For the purpose of this examination the insertion of the word "or" in place of the comma on line 6 of claim 1 is sufficient to overcome this rejection.

2. Claims 8 and 9 contain limitations that are not physically possible. Claim 8 states that the particles should comprise: 1. 0-50% by weight of styrene 2. 100-50% by weight alkyl alkylacrylate, alkyl acrylate, or a combination thereof and 3. 0.1-2.5% crosslinking agent. It is not clear to the examiner how the beads can comprise 100% of the aforementioned acrylates, and at the same time contain .1% of a crosslinking agent. A similar conflict is present in claim 9. Correction is required.

### ***Claim Rejections - 35 USC § 102***

3. Claims 1-14, and 16-17 are rejected under 35 U.S.C. 102(b) as being anticipated by Hennig et al. (US4876311).

4. Hennig et al. teaches an opaque synthetic resin that is useful for the formation of shaped and extended articles (column 2, lines 42-44). This opaque synthetic resin comprises a polymer matrix that contains crosslinked polymeric beads (column 2, lines 58-60). The polymer beads comprise 9.9-59.9% by weight of a monomer such as styrene (column 2, lines 63-64 and column 3, lines 10-43), 40-90% by weight of a second polymer such as methyl-methacrylate (column 2, lines 66-67, and column 3 line 67-column 4 line 10), .1-20% by weight of a crosslinking monomer such as divinyl-benzene and allyl-methacrylate (column 3, lines 1-2, and column 4, lines 11-34). The particles have an average particle size between 5-50 microns (column 3, lines 5-7). The polymer matrix comprises acrylic resins, particularly acrylic resins including methyl-methacrylate (column 6, lines 4-8). Most preferably, the polymer matrix and the polymer beads differ in refractive index by .04 (column 5, lines 64-68). Hennig et al. further discloses a polymeric article that is comprised of a mixture of the aforementioned polymeric particles and polymeric matrix. The particles are dispersed within the matrix and then formed into an extended article via extrusion (column 6, lines 8-32). The polymeric particle/matrix composite is 70-99% by weight of the polymer matrix mixed with 1-30% by weight of the polymeric particles (column 7-8, claim 1).

Although Hennig et al. does not explicitly disclose that the extrusion formed polymeric article described in his specification has a frosted or surface textured finish, the examiner takes the position that these features will necessarily be present. The applicant states in the specification that the requirements for a frosted finish and surface textured article are that "The frosted

appearance of the thermoplastic compositions is achieved through the mismatch of the refractive indexes,  $\Delta n > 0.02$ , of the fine particles and the thermoplastic matrices. The surface texture is controlled by the degree of crosslinking and mean size of the fine particles.” (page 3, lines 26-31). The invention described by Hennig et al. clearly meets the refractive index limitation as stated above. In addition to claiming that the particles are crosslinked, the particles described by Hennig et al. can contain up to 20% by weight of a crosslinking agent, leading the examiner to believe that the particles would be “highly” crosslinked. Further, the extruded article described by Hennig et al. clearly meets all of the compositional limitations set forth by the applicant both for the polymeric particles and the extruded article.

#### ***Claim Rejections - 35 USC § 103***

5. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hennig et al. (US4876311) as evidenced by Minghetti (US6077575).

Hennig et al. teaches all of the limitations required by claim 15 except for those listed below.

Hennig et al. does not teach the incorporation of a colorant within the polymeric particles.

Although Hennig et al. does not disclose that a colorant may be added to the polymeric particle composition, the examiner takes the position that this is a design choice. It has been shown that the addition of a colorant to particles formed in a similar manner to those described by Hennig et al. is known, as

evidenced by Minghetti, column 5, lines 35-36. Further, it is well known to add a colorant to any material in order to improve its aesthetic appeal.

Therefore it would have been obvious to one with skill in the art at the time the invention was made to incorporate a colorant into the polymeric particles described by Hennig et al.

One would have been motivated to make this modification because of the improved aesthetic appeal of the resulting article one would expect to gain as a result.

### ***Response to Arguments***

6. Applicant's arguments with respect to claims 1-17 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nikolas J. Uhler whose telephone number is 703-305-0179. The examiner can normally be reached on Mon-Fri 7:30 am - 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Thibodeau can be reached on 703-308-2367. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application  
or proceeding should be directed to the receptionist whose telephone number is  
703-305-0389.



nju  
January 30, 2002



Paul Thibodeau  
Supervisory Patent Examiner  
Technology Center 1700